

Abstract

The invention relates to an imaging method for simultaneously determining in vivo distributions of bioluminescent and/or fluorescent markers and radioactive markers at identical projection angles, the distribution of the bioluminescent and/or fluorescent markers being determined by separate detection of photons having a first average energy, which are emitted by the bioluminescent and/or fluorescent markers, by means of at least one first detector and the distribution of the radioactive markers being determined by simultaneous separate detection of photons having a second average energy, which are emitted by the radioactive markers, by means of at least one second detector. Furthermore, it also relates to an apparatus for carrying out the imaging method, containing at least one CCD camera (1, 2) as first detector, at least one single photon emission computer tomography (SPECT) detector (3) as second detector and a layer (5), which essentially reflects the photons of the bioluminescent and/or fluorescent markers and essentially transmits the photons of the radioactive markers.

(Figure 3)